The Role of Training in Global Tobacco Control Research

Despite the pandemic nature of the tobacco control problem, little attention has been given to the role of research training in stemming the global tide of tobacco use. Tobacco research plays a critical role in both shaping policy and saving lives, and training new tobacco researchers is an important part of the tobacco control agenda.

There are several conceptual training models, all of which emphasize communicative partnerships and multidisciplinary approaches. It also is important to take cultural background and specificity into account when shaping research and training agendas.

We present a number of successful training initiatives and address both the strengths and the pitfalls of these endeavors. (*Am J Public Health.* 2005;95:946–949. doi:10.2105/AJPH.2004.046888)

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IN THE BROAD CONTEXT OF global tobacco control, the critical role of research in both shaping policy and saving lives has been articulated by Warner.[1] Indeed, since the publication of the 1964 surgeon general's report on smoking and health,[2] it is clear that research has had a profound influence on public policy and smoking behavior, particularly in developed nations. However, during this same time period, tobacco use has escalated in many low-income countries (e.g., Southeast Asia, Eastern Europe) because of increased tobacco company marketing spurred on by economic incentives.

Research training in the global tobacco arena occurs in developed countries, developing countries, or both. The specifics of the jobs and the activities that are pertinent to tobacco control training efforts must be fully clarified. Moreover, the extent to which training initiatives may vary from country to country—in terms of a given country's particular research needs—also must be acknowledged. Hence, we considered several conceptual models that detail how research training can be conceived and implemented. We stress the importance of cultural appropriateness and specificity within the global arena of research training efforts and share some examples of what we view as successful (e.g., resulted in grants, presentations, publications, expert testimony, policy change) and innovative training initiatives.

TRAINING DOMAINS

As described by Warner,[1] the content of research on global tobacco control can vary from country-specific research to tobacco industry analysis to treatment. Indeed, the research arena is vast and varies widely in content, ranging from basic and applied science (e.g., cellular research, epidemiology, economics, anthropology, sociology, psychology) to tobacco control (e.g., primary prevention, treatment, harm reduction) to societal interventions (e.g., advocacy, policy, education). Hence, it is important to remember that these areas of research, including research training, should all inform one another. Unfortunately, this is often not the case. For example, it is commonplace to find basic scientists working independently of policymakers and vice versa. As a result, much of the information gleaned from each of these respective domains is never adequately communicated to the other. Future research and training efforts must include channels of communication through which tobacco control information can be conveyed to those who work in different disciplines (e.g., via multidisciplinary workshops and Web-based communications). Interestingly, in some developing countries, there is less separation between researchers and advocates, because the same individuals are often involved in both activities. For example, the South East Asia Tobacco Control Alliance (http://www.tobaccofreeasia.net) promotes both researchers' involvement in advocacy and advocates' active participation in research. This is a step in the right direction.

A major obstacle facing tobacco research initiatives is the weak national capacity for preventing and controlling noncommunicable disease, such as nicotine and tobacco addiction.[3] As asserted by Mittelmark, "The lack of trained public health professionals is a gadfly in the global response to growing threats from communicable and non-communicable diseases."[4(pS235)] Moreover, unlike most other noncommunicable disease prevention and control, nicotine and tobacco researchers face a well-funded adversary (see Warner[1]).

PROCESS OF TRAINING DEVELOPMENT

Developing trained scientists in the global arena of tobacco control presents daunting—yet exciting—challenges. Such capacity development requires dedication, motivation, communicative partnerships, and, ultimately, financial resources. Moreover, experience shows that certain aspects of international tobacco control training are imperative, such as the ability to teach the "language" of research, software development, basic research methodologies, and research writing skills. Far less valuable is sole reliance on scientists in developed countries who work only in developed countries. One useful approach has been to train a few scientists from developing countries in institutions in

developed countries and then have the trainers partner with these individuals to design training for others within the developing country. For example, the London School of Hygiene and Tropical Medicine (http://www.lshtm.ac.uk) provides training in tobacco industry document analysis.

Nchinda[5] outlined a series of principles that can be used to govern research partnerships between developed and developing countries, all of which have implications for the development of successful training initiatives. First, at least 1 of the scientists from the partner institution in the developing country should have demonstrable competence in the research subject area in order to have a balanced partnership and to minimize any superior-to-inferior relationships. As such, the research leaders of the 2 partnership groups should have similarly high scientific qualifications and should feel mutual respect for one another. Indeed, our own experience shows that the host country must possess a sense of shared intellectual ownership in order for such collaborations to succeed. Second, partnerships should focus on nurturing sustainable institutional capacities for quality research by scientists in the developing country to further research that is beneficial to both parties. Third, the research must address common themes identified by the partners, with clearly defined areas of research for each partner. The partners should hold frequent meetings to discuss progress, although limited financial resources may make this difficult.

Fourth, the scientists in the developing country should be the privileged beneficiaries of partnerships that provide opportunities for obtaining valuable experience through an association with both institutions. Shared and equal input from both parties is integral to successful training initiatives. Finally, training should remain the central focus of partnerships, with "learning by doing" and "hands-on training" of trainees from the developing country strongly emphasized and encouraged.

The importance of transdisciplinary approaches to the global tobacco problem has been given voice by numerous advocates. For instance, Taub,[6] who believes that public health professionals working across disciplines can exert a greater impact on the health of the public than they can by working independently, described a conceptual model for building the capacity of the public health workforce that draws upon health care services, education, research, and policy. Correspondingly, an Institute of Medicine report[7] recommended that professional education, research, and training embrace a transdisciplinary approach, which was defined as drawing upon broadly constituted teams of researchers who work across disciplines in the development of research questions to be addressed (see Morgan et al.[8] for a discussion about the Transdisciplinary Tobacco Use Research Centers initiative). Transdisciplinary approaches to tobacco control are particularly important because they can address the diverse influences (e.g., politics, economics, health, addiction) that underlie global tobacco use.

CULTURAL CONTEXT

To forestall and ultimately stem the inevitable rise in tobacco-related deaths in developing countries, training efforts must address the dilemma as a global one.[9] At the same time, however, the importance of cultural context cannot be overlooked. The development of effective training programs must carefully consider the cultural backdrop in which such endeavors will be undertaken. Therefore, the goals to which tobacco control training efforts must aspire are lofty. These goals call for consideration of the tobacco epidemic as global in nature, yet they also take into account the unique cultural training needs and issues as they differ across and within developed and developing countries. Experts from developed countries cannot simply barge into developing countries and purport to offer solutions to problems that may, in many important respects, be idiosyncratic to these regions. Indeed, failure to seek feedback from host country participants has likely hindered some capacity-building efforts to date. As such, the context in which the problem—tobacco use—occurs must be fully considered and understood. It is at this juncture in the research process where the trainers become the students of a new culture.

Nichter[10] pointed out that many critical aspects of tobacco use—motivations for use, constraints on use, social attitudes toward use, personal and reference group identity as a function of use, and the portrayal of tobacco use in the media—are shaped by the cultures in which they evolve. This realization has profound implications for both research and the resultant training efforts. For example, basic epidemiological data gathering may be necessary in some countries; in others, emphasis may be placed on economic analyses, treatment accessibility, or any 1 of a number of other important research domains. Correspondingly, and as noted by Warner,[1] the numerous forms of tobacco and the manners in which they are used vary tremendously across developed and developing countries alike. Well-validated measures of nicotine dependence that are suitable for use in the United States, for example, may not be suitable in India, where the importance of the first cigarette of the day does not necessarily serve as an index of overnight tobacco deprivation but rather is attributed to nicotine's laxative properties.[10] Simply put, training in research must be guided by the cultural context in which it occurs.

SUCCESSFUL TRAINING INITIATIVES

Numbers alone will not create the research necessary for addressing global tobacco control needs. Countries, especially poor countries, must have the internal resources—the people, institutional commitment, and money—to make research a viable and productive part of tobacco control efforts. Moreover, as observed by Nchinda, "Training of scientists, the key to capacity strengthening, should take place in a broad and coordinated manner through well-integrated activities . . . ." [4(p1703)] We agree that research training must be viewed as integral to all successful capacity-building efforts. Some of the most prominent efforts to date are outlined in the following paragraphs (also see Lando et al.[11]).

Building Research Capacity

Within the United States, the Fogarty International Center

at the National Institutes of Health (http://www.fic.nih.gov/programs.html) has developed the Tobacco and Health Research and Capacity Building Program, a model that is intended to (1) foster collaborative efforts between US scientists and scientists in low- and middle-income countries and (2) build both substantive knowledge and research capacity in the latter. The program is focused on 5 key research areas—epidemiology and surveillance, susceptibility and risk for smoking uptake, biobehavioral and social research, intervention research, and policy-related research—and it serves as an exemplar of how cross-cultural tobacco research training initiatives and partnerships can be successfully implemented.

Global Communication

An important and innovative capacity-building resource has been the international networks of scientists and activists who can now communicate instantly (see Stillman et al.[12] for a discussion about the Global Tobacco Research Network). GLOBALink (http://www.globalink.org) is a resource for policy-oriented activists, but it has served as an international research dissemination resource as well. The member e-mail discussion list of the Society for Research on Nicotine and Tobacco (http://www.srnt.org) is used daily to exchange information on research questions. To date, discussions have primarily focused on developed-country concerns; however, as the international membership grows, the organization and its e-mail discussion list will become significant resources for future global tobacco control researchers. Moreover, plans are under way for developing a mentoring program within the Society for Research on Nicotine and Tobacco to disseminate expert advice across the globe.

Education

Training within medical schools is emerging as another potent resource in the armamentarium against the global tobacco epidemic. Although most of these efforts have been advanced in developed countries,[13] it is clear from a global perspective that there are widespread deficits in physician knowledge and motivation about counseling patients to quit smoking.[14] Richmond et al. recently developed an impressive medical education protocol that has been incorporated into numerous medical schools across the globe, including Africa, Asia, and the Middle East.[15] Research opportunities (e.g., assessment of efficacy) from such initiatives inevitably present themselves as well. Moreover, these medical and health professionals may emerge as opinion leaders who will prove influential in increasing both the visibility and the priority given to tobacco control efforts, including research.

Multilevel Strategies

Country- and region-specific consultations on economic analyses have been engineered through the efforts of the World Health Organization (WHO), the World Bank, and the Centers for Disease Control and Prevention (CDC). These consultations are intended to assist target-country economists learning how to undertake policy-relevant economic research. For instance, the CDC has established the Global Tobacco Control Program to support sustainable global tobacco prevention and control. Another CDC initiative, the Global Youth Tobacco Survey, promotes both surveillance capacity and research skills building in low- and middle-income countries. Furthermore, the CDC is developing tools for enhancing national capacity to promote tobacco prevention and control policies. Toward this end, the CDC organizes skill-building workshops that foster an in-depth understanding of strategic approaches to designing tobacco control programs and policies.

Economic and Advocacy Skills Training

Several leading US tobacco policy scholars from the International Tobacco Evidence Network (ITEN; http://www.tobaccoevidence.net) and Johns Hopkins University's Institute for Global Tobacco Control (http://www.jhsph.edu/IGTC) have been working with the Rockefeller Foundation to select appropriate regional partners for establishing a sustainable research capacity in Southeast Asia. This 4-year training and technical assistance program not only supports research on the economic and epidemiological aspects of tobacco use and tobacco control but also teaches advocacy skills to local tobacco control activists. These advocates thus serve as the "customers" for the kind of public policy–relevant research that is integral to the project. Training and capacity building are carried out via workshops that aspire to (1) cultivate mentor-to-mentee relationships between individual researchers and international tobacco control experts, (2) provide scholarships to talented individuals who have the potential to become national champions of the tobacco control movement, and (3) establish a research grant competition that provides the necessary resources for carrying out the research activities.

An important aspect of the ITEN project proved to be establishing both effective methods of knowledge transfer and efficient modes of communication. These objectives were attained over time and were supported, in great part, by creating an environment of mutual respect and trust. During the course of the project, partners learned how to both integrate cultural differences into training curriculums and develop an agenda with which all participants felt comfortable. Moreover, a governing principle was that ownership of both the process and the results must stay in the region.

Certain difficulties will inevitably present themselves during such collaborative efforts. For instance, sustained recruitment of researchers within the host country proved problematic. In response, the ITEN modified its focus from recruiting additional researchers to providing continuing mentoring and hands-on training to the initial cadre of researchers. In another instance, failure to include prayer time for Muslim workshop participants emerged as an oversight that, upon its recognition, was quickly rectified.

Cost Efficiency

It is worth noting that many of the training activities (e.g., workshops, Web-based databases) can be provided at a relatively low cost. Thus, although there are financial constraints that limit the global context of tobacco research training, there are some relatively inexpensive, yet viable, options available.

CONCLUSION

The tobacco problem is not going away soon. Research training initiatives are integral to all capacity-building efforts, particularly within developing countries. Although many promising inroads have been made already, much work lies ahead. The success of such initiatives is contingent upon collaborative efforts that acknowledge—and embrace—the differences in the cultural contexts in which tobacco use occurs. For public health to exact its science in areas that need it most, the cultural backdrop must ultimately inform and guide the content and the process of research and training initiatives. Moreover, such endeavors must be steeped in transdisciplinary perspectives that take into account the multiple influences that govern tobacco use. ■

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